Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 3: *Advanced Technology Development (ATD)*	R-1 ITEM NOMENCLATURE PE 0603003A: *AVIATION ADVANCED TECHNOLOGY*	PROJECT 447: *ACFT DEMO ENGINES*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
447: *ACFT DEMO ENGINES*	17.264	10.943	9.635	-	9.635	9.813	9.998	10.167	10.340	Continuing	Continuing

Note

This project matures and demonstrates power system technologies through design, fabrication, and evaluation of advanced engine components in order to improve the performance of turbine engines. This project supports Army transformation by demonstrating mature technologies for lighter turbine engines that provide increased power, increased fuel efficiency, improved sustainability and reduced maintenance. These advanced engine designs will significantly improve the overall aircraft performance characteristics and reduce the logistical footprint of rotary wing aircraft.

The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan.

A. Mission Description and Budget Item Justification

Work in this project is performed by the Aviation Applied Technology Directorate of the Aviation and Missile Research, Development, and Engineering Center (AMRDEC), at Fort Eustis, VA.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Title: Advanced Affordable Turbine Engine (AATE) Technology	17.264	10.943	-
Description: Demonstrate a 3000 horsepower gas turbine engine for improved operational capability for Blackhawk, Apache, and other future rotorcraft. AATE includes two competitive engine demonstrator efforts (1 - General Electric and 2 - Advanced Turbine Engine Company (ATEC) (Honeywell and Pratt & Whitney Joint Venture)). Work in this project is complementary with efforts in PE 0602211A, project 47A.			
FY 2010 Accomplishments: Integrated core engine components into gas generator configurations, completed initial evaluation, and demonstrated mechanical integrity of the integrated core engine designs; integrated power turbines and conducted first full engine evaluations, establishing initial engine performance capability; determined design modifications required to fully achieve performance goals; and designed and fabricated component modifications to meet performance goals.			
FY 2011 Plans: Complete optimized component evaluations and analyze results in support of engine demonstration; integrate optimized components into goal engine demonstrator hardware; complete full engine demonstration to include final engine performance and weight assessment; complete additional engine evaluations to gain insight into engine durability characteristics; and upon			